

REMARKS/ARGUMENTS

The non-final Office Action mailed April 5, 2007 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. Claims 1-51 originally appeared in the application. Claims 2-4, 6-9, 13-17, 19, 21-23, 25-28, 31-34, 36, 38-49, and 51 are withdrawn from consideration in a response to a restriction requirement. The claims presented for examination are: claims 1, 5, 10, 11, 18, 20, 24, 29, 30, 35, 37, and 50.

35 USC §102(e) Rejection

In numbered paragraphs 6-9 of the Office Action mailed April 5, 2007, claims 1, 5, 10, 18, 20, 24, 29, 35, 37, and 50 were rejected under 35 USC §102(e) as being anticipated by the Fishman reference (US Published Patent Application No. 2003/0032946).

The Fishman Reference

The Fishman reference is United States Published Patent Application No. 2003/0032946 which shows an artificial synapse chip 10 in FIG. 1A reproduced below.

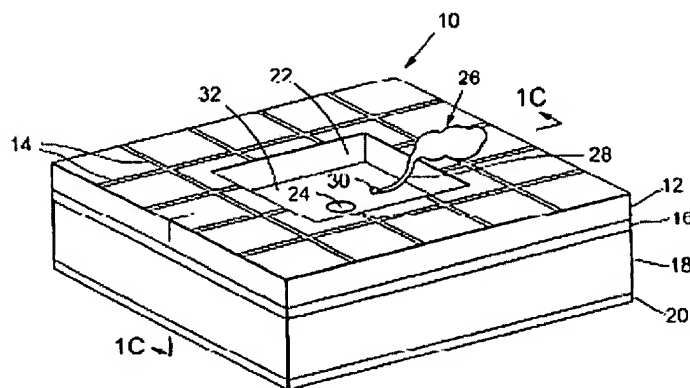


FIG. 1A

In the Fishman reference a micropattern 14 is provided on substrate 12, effective to direct and guide the growth of cells and cell processes in contact with the substrate 12. A preferred method of producing a micropattern 14 is to contact substrate 12 with a microcontact printing stamp having an ordered assemblage of molecules, which may be a discontinuous assemblage, for deposition on to substrate 12.

FIG. 3 is a plan view SEM of a stamp embodying features of the invention for making a micropattern 14 on a surface. FIG. 3 is reproduced below.

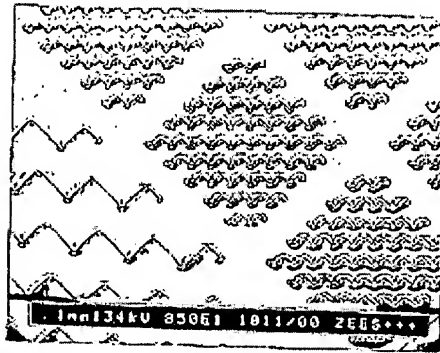


FIG. 3

The micropattern 14 may include growth factors, cell adhesion molecules, antibodies specific to cell surface proteins of the neurite or cell body, or other molecules or atoms effective to guide or modulate the growth of a neurite or the attachment of a cell or cell process.

The Fishman Reference Does Not Anticipate Applicants' Invention

Applicants have amended independent claims 1, 20, and 35. Claims 5, 10, 18, 24, 29, 37, and 50 depend from the independent claims 1, 20, and 35. Applicants believe the invention claimed in amended independent claims 1, 20, and 35; and dependent claims 5, 10, 18, 24, 29, 37, and 50 is not anticipated by the Fishman reference. The standard for a 35 USC §102 rejection is stated in *RCA Corp. v. Applied Digital Systems, Inc*, 221PQ 385, 388 (d. Cir. 1984) "Anticipation is

The Examiner Has Not Established The Criteria That The References Must Teach All Claim Limitations

The third criteria of the Examiner's initial burden of factually supporting a *prima facie* conclusion of obviousness is: "the prior art reference (or reference when combined) must teach or suggest all the claim limitations." Applicants point out that the following claim limitations of Applicants' amended independent claims 1, 20, and 35 and dependent claims 11 and 30 are not found in the Albert et al reference or the Rogers reference:

"stretchable electronic circuit," or

"a method of producing a stretchable electronic circuit" or

"at least one microchannel in said solid stretchable polymer body made entirely of poly(dimethylsiloxane), said at least one microchannel having a microchannel longitudinal axis that is concurrent with the central longitudinal axis of the circuit, wherein said at least one microchannel extends fully along said microchannel longitudinal axis," or

"providing at least one microchannel in said solid stretchable polymer body made entirely of poly(dimethylsiloxane) with said at least one microchannel having a microchannel longitudinal axis that is concurrent with the central longitudinal axis of the circuit, wherein said at least one microchannel extends fully along said microchannel longitudinal axis," or

"a multiplicity of circuit line longitudinal components that extend in the longitudinal direction, wherein said multiplicity of circuit line longitudinal components include said multiplicity of microchannel longitudinal components," or

"a multiplicity of circuit line offset components that extend at an angle to the longitudinal direction, wherein said multiplicity of circuit line offset components include said multiplicity of microchannel offset components," or

"wherein said at least one microchannel and said electrically conductive media form an electronic circuit line that extends fully along said

microchannel longitudinal axis and is operatively connected to said solid stretchable polymer body made entirely of poly (dimethylsiloxane).”

Since both references fail to show the claim limitations, there can be no combination of the two references that would show Applicant’s invention defined by claims 1, 11, 20, 30, and 35 and render it unpatentable. There is no combination of the Albert et al reference and the Rogers reference that would produce the combination of elements of Applicants’ claims 1, 11, 20, 30, and 35. Further, there is no teaching of combining the Albert et al reference and the Rogers reference to meet Applicants’ claims 1, 11, 20, 30, and 35. Thus, the combination of references fails to support a rejection of the claims under 35 USC § 103 and the rejection should be withdrawn.

The Examiner Has Not Established The Criteria That There Must Be A Suggestion or Motivation to Combine References

The first criteria of the Examiner’s initial burden of factually supporting a *prima facie* conclusion of obviousness is: “there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” There is no suggestion or motivation to combine the primary Albert et al reference and the secondary Rogers reference.

The primary Albert et al reference and the secondary Rogers reference disclose devices that are substantially different from each other and both devices are different from Applicants claimed “stretchable electronic circuit,” and “method of producing a stretchable electronic circuit.” Since the primary Albert et al reference is an electronic display with a polyester sheet with electrical connections formed of copper with vias through the dielectric to provide for electrical contact to a display element with the driver chip and other IC's, there is

established only when a single prior art reference discloses, either expressly or under principles of inherency, each and every element of a claimed invention.”

The Fishman reference does not disclose each and every element of independent claims 1, 20, and 35 or dependent claims 5, 10, 18, 24, 29, 37, and 50. The Fishman reference does not disclose an electronic circuit. In the Fishman reference a micropattern is provided on the substrate effective to direct and guide the growth of cells and cell processes in contact with the substrate. The Fishman reference does not disclose Applicants’ claim elements, “a stretchable electronic circuit,” or “a method of producing a stretchable electronic circuit,” or “said circuit line longitudinal component and said circuit line offset component allowing the circuit to stretch in the longitudinal direction while maintaining the integrity of said at least one circuit line.”

In addition, the following claim elements of Applicants’ amended independent claims 1, 20, and 35; and dependent claims 5, 10, 18, 24, 29, 37, and 50 are not found in the Fishman reference:

“at least one microchannel in said solid stretchable polymer body made entirely of poly(dimethylsiloxane), said at least one microchannel having a microchannel longitudinal axis that is concurrent with the central longitudinal axis of the circuit, wherein said at least one microchannel extends fully along said microchannel longitudinal axis,” or

“providing at least one microchannel in said solid stretchable polymer body made entirely of poly(dimethylsiloxane) with said at least one microchannel having a microchannel longitudinal axis that is concurrent with the central longitudinal axis of the circuit, wherein said at least one microchannel extends fully along said microchannel longitudinal axis,” or

“wherein said at least one microchannel and said electrically conductive media form an electronic circuit line that extends fully along said microchannel longitudinal axis and is operatively connected to said solid stretchable polymer body made entirely of poly (dimethylsiloxane).”

Since the Fishman reference does not disclose each and every element of Applicants' claims and Applicants' claim elements described above are not found in the Fishman reference, the Fishman reference does not support a 35 USC §102(e) rejection of Applicants' claims 1, 5, 10, 18, 20, 24, 29, 35, 37, and 50 and the rejection should be withdrawn.

35 USC §103 Rejection – Albert et al In View of Roger

In numbered paragraphs 11-12 of the Office Action mailed April 5, 2007 claims 1, 11, 20, 30, and 35 were rejected under 35 USC §103(a) as allegedly being unpatentable over the Albert et al reference (U.S. Published Patent No. 2003/0020844) in view of the Roger reference (U.S. Patent No. 6,337,761).

Applicants have amended independent claims 1, 20, and 35. Claims 11 and 30 depend from the independent claims 1, 20, and 35. Applicants believe that independent claims 1, 20, and 35 and dependent claims 11 and 30 are patentable and that the Albert et al reference and the Rogers reference would not support a 35 USC §103(a) rejection.

Albert et al Reference

The Albert et al reference shows an electronic display 100 illustrated in FIG. 2A reproduced below.

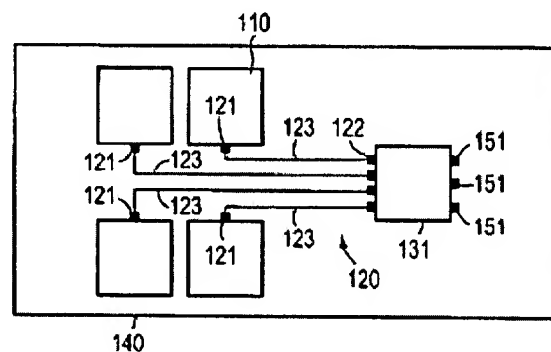


FIG. 2A

The display 100 can employ various materials. The flexible substrate 140 can comprise a polyester sheet with electrical connections 123 formed of copper by conventional patterning techniques. Alternatively, the electrical connections 123 can be printed with silver ink or carbon ink. The electrical connections can be coated by printing with a dielectric, for example a polymer. Vias through the dielectric can provide for electrical contact to a display element 110. Each electrical connection 123 is in communication with a first contact pad 121 and a second contact pad 122. Further, each first contact pad 121 is in electrical communication with one of the display elements 110 while each of the second contact pads 122 is in electrical communication with the driver chip 131. The driver chip 131 is in electrical communication with other contact pads 151 to provide for electrical communication with other IC's (not shown) of the control circuit 130.

The Rogers Reference

The Rogers reference discloses an electrophoretic display and an electrophoretic display is described as essentially comprising a suspension of charged colored particles (typically white) in an optically dense liquid of another color. The suspension is maintained between two electrodes that define a sealed cell. It is "optically dense" in the sense that the suspension medium is sufficiently colored that one cannot see from one side of the cell to the other. When a potential difference exists between the electrodes, the particles are driven away from one of the electrodes towards the other electrode. When driven to the side of the cell nearest the viewer, the color of the particles will dominate the color of the display. Conversely, when the particles are driven to the far side, away from the viewer, the color of the liquid dominates the color of the display.

The Rogers reference is directed to, "a configuration for an electrophoretic display device that is effective in substantially preventing agglomeration of the

pigment particles. With this configuration, a suspension medium is contained between first and second electrodes to define a cell; a plurality of pigment particles are dispersed in the suspension medium; and a plurality of mechanical members' project in the suspension medium. The members advantageously are sized sufficiently small that a plurality of members can exist within a minimally visible region of the cell, and they are configured (e.g., depending on size and materials), to have no adverse impact on the appearance of the display. The mechanical members may be fabricated separately from the remaining parts of the display, allowing for flexibility in the fabrication materials and processing conditions."

Patentability of Applicants' Claimed Invention

Applicants' claims 1, 11, 20, 30, and 3 were rejected under 35 USC §103(a) as being "obvious" over the two references. The Examiner bears the initial burden of factually supporting a *prima facie* conclusion of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or reference when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

no suggestion or motivation to combine it with the secondary Rogers reference that relates to an electrophoretic display device that is effective in substantially preventing agglomeration of the pigment particles. Even if the Albert et al and the Rogers devices were combined it would not produce Applicants' claimed invention.

The first criteria that there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings has not been established. Thus, the combination of references fails to support a rejection of the claims under 35 USC § 103 and the rejection should be withdrawn.

The Examiner Has Not Established The Criteria That There Must be a Reasonable Expectation of Success

The second criteria of the Examiner's initial burden of factually supporting a *prima facie* conclusion of obviousness is: "there must be a reasonable expectation of success." There would not be a reasonable expectation of success in combining the primary Albert et al reference and the secondary Rogers reference.

The primary Albert et al reference is an electronic display with a polyester sheet with electrical connections formed of copper with vias through the dielectric to provide for electrical contact to a display element with the driver chip and other IC's. The secondary Rogers reference is an electrophoretic display device that is effective in substantially preventing agglomeration of the pigment particles. The reference devices are substantially different from each other and both devices are different from Applicants claimed "stretchable electronic circuit," and "method of producing a stretchable electronic circuit."


There would not be a reasonable expectation of success in attempting to combine the two very different devices. Even if the Albert et al and the Rogers devices were combined it would not produce Applicants' claimed invention.

The second criteria that there must be a reasonable expectation of success in combining the references has not been established. Thus, the combination of references fails to support a rejection of the claims under 35 USC § 103 and the rejection should be withdrawn.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated April 5, 2007 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,


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Livermore, California
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